

## **Historical changes to Hood Canal riparian forest landscapes**

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Though limited in spatial extent, riparian forests are among the most dynamic and diverse portions of Pacific Northwest watersheds. Our knowledge of riparian forest ecological functions and values in the Pacific Northwest has expanded rapidly over the last 30 years. Riparian forests harbor more species of at-risk bird and amphibian species than any other landscape element, and are critical to the maintenance and creation of in-stream habitat for threatened salmonids. However, there is little information on historical changes to riparian forests and this knowledge gap hinders effective ecosystem management. In this study, we combined archival land survey records and contemporary field surveys to chart historical changes to riparian forest ecosystems for Hood Canal, Washington. Comparison of historical land survey and contemporary field data reveal distinct shifts in riparian tree species composition, age structure, and spatial patterns over the last 150 years. Our findings suggest new questions pertinent to land management policies, provide important context for contemporary field studies and restoration, and underscore the critical importance of an historical perspective for effective ecosystem management.